ALOHA®

ALOHA® (Areal Locations of Hazardous Atmospheres) is a computer program that uses information provided by the user and physical property data from its extensive chemical library to predict how a hazardous gas cloud might disperse in the atmosphere after an accidental chemical release. ALOHA can predict rates of chemical release from broken gas pipes, leaking tanks, and evaporating puddles, and can model the dispersion of both neutrally buoyant and heavier-than-air gases.

ALOHA produces a "footprint" plot of the area downwind of a release where concentrations may exceed a user-set threshold level as well as plots of source strength (release rate), concentration, and dose over time. ALOHA can accept weather data transmitted from portable monitoring stations, and can plot footprints on electronic maps displayed in a companion mapping application, MARPLOT®.

ALOHA originated as an in-house tool to aid in emergency response. It has evolved over the years into a tool used for response, planning, training, and academic purposes. Because ALOHA is intended for use during hazardous chemical emergencies, it was designed to meet the following criteria:

Operates on common computers...

ALOHA runs quickly on personal computers (Macintosh or Windows-compatible) that are easily transportable and affordable for most users. Its algorithms represent a compromise between accuracy and speed; it has been designed to produce good results quickly enough to be of use to responders during emergencies.

User friendly...

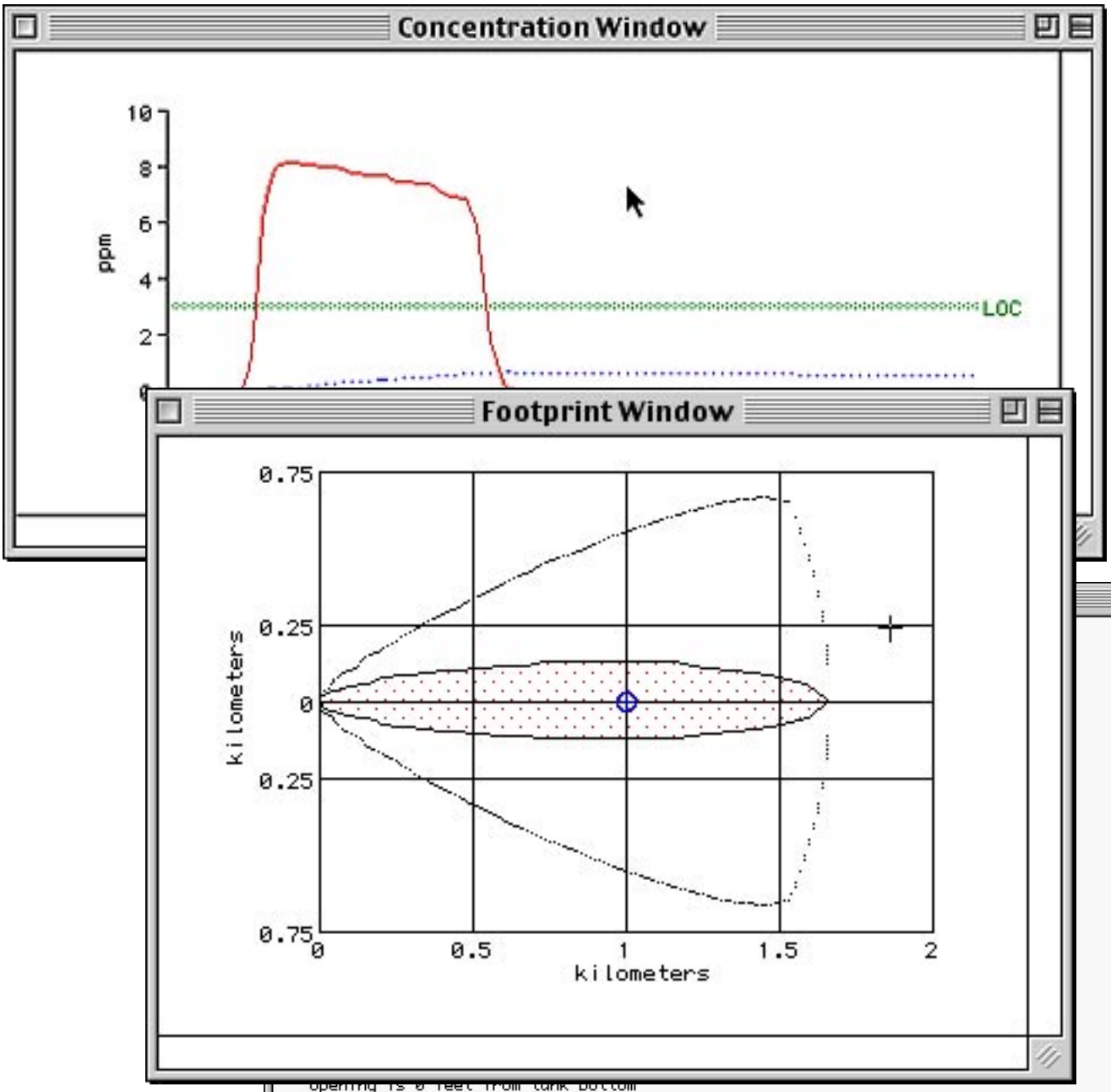
ALOHA is designed to be easy to use so that inexperienced responders can use it during high-pressure situations.

Reliable...

ALOHA's user interface is designed to minimize operator error. The program checks and cross-checks information entered by the user before proceeding to solutions. If a particular input value is unlikely or not physically possible, the program requests a new value.

ALOHA runs on Apple Macintosh computers and in Microsoft Windows 95, 98, NT, or 2000. It requires at least 1 megabyte of random access memory (RAM) and a hard drive. ALOHA is available for downloading from http://www.epa.gov/ceppo/cameo/aloha.htm.

For additional information: visit http://response.restoration.noaa.gov/cameo/aloha.html, e-mail orr.cameo@noaa.gov, or call 206/526-6317.



Opening is 0 feet from tank bottom
Release Duration: 17 minutes
Max Computed Release Rate: 28.7 kilograms/min
Max Average Sustained Release Rate: 28.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 454 kilograms
Note: The chemical escaped as a mixture of gas and aerosol (two phase flow).

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 1.7 kilometers

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 0.62 miles
Off Centerline: 0 miles
Max Concentration:
Outdoor: 8.08 ppm
Indoor: 0.641 ppm
Note: Indoor graph is shown with a dotted line.

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